

#### **4 Action by Aerodrome Tower Controller:**

4.1 On being notified by WSO that ILS CAT II/CAT IIIA/CAT IIIB Low Visibility Procedures are to commence, the Aerodrome Tower Controller will:

- a. inform Aerodrome Rescue & Fire Fighting Services & Apron Control-I,
- b. check ILS status
- c. check lighting is correctly selected and operating properly
- d. check transmissometers display

4.2 After the commencement of ILS CAT II/CAT IIIA/CAT IIIB operations, the Aerodrome Tower Controller shall -

- a. check ATIS broadcast and include the message that “ILS CAT II/ CAT IIIA/ CAT IIIB Low Visibility Procedures in operation”.
- b. give landing clearance to aircraft not later than 2NM from touch down.
- c. inform changes in RVR, readings to the landing aircraft.
- d. give an unimpeded taxi route to arriving aircraft to allow it to clear the Localizer Sensitive Area expeditiously.
- e. inform pilots of all failures of ILS, lighting system, transmissometers relevant to ILS CAT II/ CAT IIIA/CAT IIIB Low Visibility Operations.
- f. initiate emergency action if aircraft on CAT II/CAT IIIA/CAT IIIB ILS is not seen (on radar or otherwise) or is not in radio contact as expected.

4.2.1 Record of the above actions with time, be maintained and signed by the officer taking action.

#### **5. Action by Approach/Radar Controller**

5.1 On being advised by WSO that ILS CAT II/CAT IIIA/CAT IIIB Low Visibility Procedures are effective, the Approach/Radar Controller shall :-

- a. inform the arriving aircraft “ILS CAT II/CAT IIIA/CAT IIIB Low Visibility Procedures in operation”.

(Note: Ensure that Pilot acknowledges of being cleared for ILS CAT II/CAT IIIA/CAT IIIB Approach.)

- b. inform TDZ RVR to arriving aircraft and in addition
  - (i) For CAT II operations - If TDZ RVR is below 550 meters then MID RVR shall also be passed.
  - (ii) For CAT IIIA operations – If TDZ is below 350 meters, then MID & End RVR readings shall also be passed.
  - (iii) For CAT IIIB operations - If TDZ is below 200M then MID and END RVR shall be passed.

NOTE : After an aircraft is 8NM from Touch Down or has passed outer marker RVR observations need not be passed unless there is changes in RVR values.

- c. vector the aircraft to intercept the localizer not less than 10NM from touchdown.
- d. not subject an aircraft to any speed control.
- e. issue landing clearance to arriving aircraft not later than 2NM from touchdown.

## **6. Action by Surface Movement Control**

6.1 During the period the Low Visibility Procedures are effective the Surface Movement Controller shall:

- a. monitor all surface movement of aircraft and vehicles on the maneuvering area.
- b. inform all taxiing aircrafts of the preceding taxiing or holding aircraft.
- c. hand over only one aircraft at a time to Tower Controller.
- d. Permit only the vehicles equipped with transponder in the maneuvering area during Cat IIIB operations. However, other vehicles crossing taxiway N and M1 on service road shall be regulated by official of Apron Control by deploying manpower with two way R/T communication under control of Apron Control II.

## **7. Action by Technical/Electronics Shift Supervisory Officer**

7.1 On receipt of 'Outlook for LVP' from the WSO, the Technical/Electronics Shift Supervisory Officer [SSO] will inform the Duty Officer, Equipment Room, and have the ILS equipment and its status indicators in ATC units checked up. He will inform WSO of any unserviceability in the equipment which is likely to affect ILS CAT II/CAT IIIA/CAT IIIB operation.

7.2 On receipt of 'Advisory Message' from WSO that LVP are to be made effective, SSO will maintain continuous watch on the performance of ILS equipment and will inform WSO of any un-serviceability which may affect ILS CAT II/CAT IIIA/CAT IIIB operation.

## **8. Action by Ground and Flight Safety (GFS) Department**

### **8.1 Action by Airport Manager, Apron Control-I**

8.1.1 On receipt of advice from WSO to implement Low Visibility Procedures, the Airport Manager, Apron Control-I will immediately inform the following:

- (i) Deputy General Manager (Airport-shift)
- (ii) Assistant Engineer [Electrical] in shift on R/T 161.825 MHz
- (iii) Assistant Engineer (Civil), Operational Area Maintenance [during day time only] to ensure that all civil works in progress in movement area is stopped and that the work area is restored in complete serviceable condition and confirm to Airport Manager, Apron Control – I accordingly. During ILS CAT-II/CAT-III/ CATIIIB Low Visibility Operations, no equipment, manpower or material shall be present in sensitive areas of localizer and glide path.
- (iv) Assistant Airport Manager, Apron Control II.
- (v) Airport Manager, Terminal-I B

- (vi) Airport manager Terminal-IA
- (vii) Central Industrial Security Force (CISF) Control Room-I

8.1.2 Airport Manager, Apron Control-I shall deploy a Traffic Hand at barrier near Terminal IA to stop vehicular movement on the perimeter road around Runway 28, except AAI operational vehicles fitted with R/T and operating with prior clearance from ATC. However, he shall ensure that vehicles used during CAT IIIB operations are equipped with transponder.

8.1.3 Manager Apron Control-I shall deploy security jeep with Security Supervisor/ Airport Assistant Airport Manager to ensure that vehicles do not operate on the service road beyond Terminal IA building and taxiways C and E. Signboards for stopping movement of vehicles shall be switched 'ON' by the Security jeep. Signboards shall be displayed on or before barrier/closure points.

8.1.4 Assistant Airport Manager/Security Supervisor in Security Jeep equipped with transponder (vee-lo) shall ensure that -

- a. No vehicles/person enters or is present in the sensitive/critical areas localizer and glide path.
- b. All civil/electrical works in progress to be stopped in the maneuvering area immediately and men/material/equipment to be removed from the sensitive/critical areas of localizer and glide path.

8.1.5 After ensuring above, Assistant Airport Manager/Security Supervisor will confirm the same to the Airport Manager, Apron Control-I.

8.1.6 Security jeep shall also ensure that the barriers are manned with personnel equipped with walkie-talkie

8.1.7 Subsequently, Security Jeep shall remain available in apron area and will maintain listening watch on R/T 121.9 MHz and 161.825 MHz.

8.1.8 On receipt of information about unserviceability of any of the runway visual aids or power supply system, Airport Manager, Apron Control-I will immediately inform ATC Tower accordingly.

8.1.9 No vehicles on domestic apron shall enter/cross in the vicinity of runway or any taxi track without permission from ATC Control Tower. Apron Control-I shall coordinate with Control Tower for permission, if any vehicles of the fire services, civil, electrical division or of any other agency has to enter the runway or taxi track for urgent operational requirement. During CAT IIIB operations such vehicles shall be equipped with transponder (Vee-lo).

8.1.10 None of the workers/vehicles of grass cutting contractor, garbage removal contractor, electrical/civil contractor shall enter the operational area during the operations of ILS CAT II/CAT IIIA/CAT IIIB Low Visibility Procedures.

8.1.11 All coordination with AAI units and ATC shall be carried out by Airport Manager, Apron Control-I only.

8.1.12 Airport Manager, Apron Control-I would advise ATC Tower/Watch Supervisory Officer when all actions are completed for commencement of LVP.

## **8.2 Action by Airport Manager, Apron Control-II**

8.2.1 Assistant Airport Manager/Security Supervisor on-duty shall:-

- a. inform Senior Airport Manager (SAM-II)/Airport Manager (AM-II)
- b. deploy one Traffic hand at barrier on service road parallel to taxi-way 'P' for closing the barrier and stopping the vehicular movement.
- c. inform CISF Control Room-II.
- d. deploy one traffic hand to ensure that sensitive area of localizer at Rwy 10 beginning is not infringed by any vehicle/person. The sensitive area will be suitably marked for this purpose.
- e. divert all vehicular traffic from Terminal-II to Terminal-I from the service road around RWY10 beginning
- f. authorize operations of vehicle on manoeuvring area with prior permission from ATC Control Tower only.

## **8.3 Action by Assistant Manager (Elect) on Shift Duty**

8.3.1 On receipt of advice to implement Low Visibility Procedures from Apron Control-I, Electrical Section will check in co-ordination with Apron Control-I that following visual aids associated with RWY28 are serviceable and can be operated at full intensity.

- a. Approach lighting system
- b. Runway edge lights
- c. Runway threshold and end lights
- d. Runway centre line lights
- e. Runway touch down zone lights
- f. Stop Bar Lights
- g. Taxiway edge lights
- h. Taxi holding position lights
- i. Runway clearance light

(NOTE- No adjustment of light intensities shall be made without permission from Control Tower)

8.3.2 He shall ensure that no electrical maintenance works is carried out during LVP either in power house or on any electrical facilities used during CAT II/CAT IIIA/CAT IIIB operations.

8.3.3 He will confirm the serviceability of above visual lighting aids to Airport Manager, Apron Control-I.

8.3.4 He will ensure that runway switch room is manned and position himself at New Power House for standby power supply requirements and will maintain a listening watch on R/T 161.825

MHz. He will ensure availability of power supply to meet CAT IIIA/CAT IIIB requirement.

8.3.5 He will inform the un-serviceability or any change in status of any facility/systems to Airport Manager, Apron Control -I immediately.

#### **8.4 Action by Airport Manager Terminal-IB**

8.4.1 Inform regarding implementation of Low Visibility Procedures to Indian Airlines-GSD, Engg., Ops., Cargo, Alliance Air, Operations & Engineering; Air Force, ARC, BSF, Private airlines. List of the persons/agencies to be informed along with their direct and intercom numbers should be readily available with the Airport Manager.

#### **8.5 Action Dy. General Manager(Airport-shift)/by Sr. Airport Manager-I**

8.5.1 When on duty, DGM (Airport-shift) will be overall responsible for ensuring smooth coordination between all AAI units and other concerned agencies. In the absence of DGM (Airport-shift), SAM-I shall be responsible for these activities.

#### **8.6 Action by Airport Manager-II**

8.6.1 Inform all airlines including non-scheduled operators at Terminal-II that Low Visibility Procedures are in force. List of the persons/agencies to be informed along with their direct and intercom numbers should be readily available with the Airport Manager-II

#### **8.7 Action by Sr. Airport Manager-II**

8.7.1 During the absence of DGM (Airport-shift) & SAM-I, he will be overall responsible for ensuring smooth coordination between all AAI units and other concerned agencies.

#### **8.8 Action by Main Fire Station**

8.8.1 Fire Officer on duty will ensure that fire vehicles equipped with serviceable transponder take predetermined positions. Safety services vehicles will take following predetermined positions when LVP are in force.

- a One CFT on north of RWY28/10 near TWY E
- b One safety south of RWY 28/10 near TWY L.

#### **9. Action by Airport Security Police (CISF)**

9.1 Chief Airport Security officer shall ensure that power house and other vital electrical installations are properly secured and protected against any unauthorized intrusion by deploying adequate manpower.

9.2 The Inspector in charge, on receipt of advice to implement Low Visibility Procedures, will immediately inform all access gates and CISF posts under their respective controls in operational area to restrict and guide all the vehicles to use the service road towards RWY10 side only, for proceeding to Terminal-II and vice-versa, till such time he is informed of termination of ILS CAT II/CAT IIIA/CAT IIIB Low Visibility Procedures.

9.3 For carrying out Security Checks of their security personnel on RWY28 side, Inspector In-Charge of CISF Control Room I/II would be escorted by 'Follow-Me Jeep' equipped with transponder during CAT IIIB operations for which they would liaise with Apron Control I/II respectively.

#### **10. Action by Duty Officer (Meteorological Office)**

10.1 Duty Meteorological Officer would issue an 'Outlook for Low Visibility Procedures' to the Watch Supervisory Officer [WSO] of air traffic services whenever he expects that the RVR [RWY28] and/or cloud ceiling will fall below 800 metres and/or 200 feet or less respectively.

10.2 Whenever the Duty Met. Officer visualizes that RVR [Runway 28] is likely to fall below 800 meters and/or cloud ceiling to 200 feet or less within next 2 hours, he will issue an 'Advisory Message' to WSO to this effect.

10.3 When the RVR and/or cloud ceiling are 800 metres and/or 200 feet respectively and the trend is towards improvement in these elements of weather conditions, the Duty Met Officer may, when requested by WSO, advise him about such improving weather conditions for the purpose of termination of LVP operation.

10.4 The Duty met. Officer would ensure that the RVR displays in ATC units in the Control Tower and Approach Control are serviceable. He would also ensure that RVR/visibility recorders of Touch-down zone, Mid-point and Stop-end positions are serviceable.

NOTE : Due to high variability of meteorological elements in space and time and the limitations of forecasting techniques available, it may not be always possible to issue a precise forecast of RVR particularly in case of transient weather phenomenon within two hours.

#### **11 Action by Other agencies at airport such as - Airlines, Refueling Companies, Catering Agencies, Airport Police, Customs, Immigration, Health**

11.1 All agencies operating in the operational area shall ensure that minimum number of their vehicles, as are absolutely essential for aircraft operations, operate in the operational area. The drivers of these vehicles should keep a look out for taxing aircraft and other vehicles to prevent accidents. During CAT IIIB operations only vehicles equipped with serviceable transponder shall be permitted to operate in maneuvering area.

11.2 All the vehicles must have their obstruction lights "ON" during operation of low visibility procedures.

11.3 All vehicles operating between Terminal-I & Terminal-II shall use service road towards RWY10 side only.

11.4 Follow all instructions/sign boards provided for vehicular movement area/service roads.

11.5 No vehicle/equipment/personnel shall enter in and around the vicinity of the runways or taxi-tracks except with prior permission of AAI Apron Control-I or II, who in turn shall coordinate with aerodrome control tower.

## 12 TERMINATION OF LOW VISIBILITY PROCEDURES

12.1 When met conditions improve and TDZ MID and END RVR are 800m or more and the cloud ceiling is 200 Feet. or higher and trend is for improvement the WSO would terminate operation of LVP. He may obtain advice from Duty Met. Officer, as provided at Para 10.3 above the improving weather conditions for the purpose of termination of LVP operations.

12.2 The WSO will intimate the following regarding termination of LVP operations

- a. Aerodrome Tower Controller
- b. Approach/Radar Controller
- c. Technical/Electronics Shift Supervisory Officer (SSO)

12.3 Aerodrome Tower Controller will in turn inform Airport Manager, Apron Control-I, who will advise all the previously notified personnel to resume normal operations.

## VI Coverage of ILS RWY 28

### 1. LLZ

- a. 10 Deg on either side of RWY centerline at 25NM.
- b. 28 Deg on either side of RWY centerline at 17NM.
- c. 35 Deg on either side of RWY centerline at 10NM.

### 2. Glide Path

- I. 08 Deg on either side of RWY centerline at 10NM.
- II. Upto 4 Deg in elevation above Glide Path.

### 3. ILS CAT II/IIIA/IIIB operation with following conditions.

- I Alternate navigational facilities of VOR/DME and Radar shall be provided to cater for the complete LLZ coverage as per requirements of ICAO Annex 10.
- II The Instrument approach procedure for Cat II/IIIA/IIIB shall be commenced either via VOR/DME arc or via STAR unless vectored on Radar.
- III ILS approach for CAT II/IIIA/IIIB operations shall be monitored on Radar.

## VIDP AD 2.23 ADDITIONAL INFORMATION

### I SUITABILITY AND OTHER INFORMATION ABOUT AIRCRAFT PARKING STANDS

#### a) Terminal -I

- I) Stands 121 to 132 are suitable for A321 type of aircraft.
- II) Stands 134 to 152 are suitable for B-737-800 winglet type of aircraft.
- III) Stands 157 to 168 are suitable for aircraft of Wing span 16.55M and length 16.97M.

**b) Terminal -II**

- i) In contact parking stand:- 41 to 49.  
Remote parking stands:- 81 to 92.  
Parking stands from 41 to 44, 47 to 49 are suitable for B747-300 type of aircraft.  
Parking stands nos. 45 and 46 are suitable for B747-400 type of aircraft.  
B747-400 series of aircraft can be parked on alternate parking stands, Except that B747-400 can not be parked on stand no. 41. However, simultaneous parking of B747-400 aircraft permitted on stands 45 & 46.
- ii) Stands 81B, 81A, 82B, 82A & 85A are suitable for G- 5 Type of Aircraft  
Provided 81,82 and 85 are vacant.  
Stands 83B, 83A, 84B & 84A are suitable for A321 type of aircraft provided 83 & 84 are vacant.  
Stands 81, 82, 83,84 & 85 are suitable for B 747-300 type of aircraft provided stands 81B, 81A, 82B, 82A, 83B, 83A, 84B, 84A and 85A are vacant.
- iii) Parking stands 86 to 92 are suitable for B747-400 type of aircraft.

**iv) Aerobridges**

- a) One Aerobridge for L-2 door on stand nos. 41, 44, 46, 47 & 49.  
b) Two Fingers (L1 and L2) doors on stand numbers 42,43,45 and 48.

**v) Visual docking guidance system.**

Parking stands 41 to 49 are provided by visual docking guidance system.

**vi) Parallax Aircraft Parking Aids (PAPA) / Ground Markings**

Nose wheel bars / Marking for the following types of aircraft are also provided on stands 41 to 49.

Stand 41	B767-300, B767-200/DC-10, A300, A310, A330/340.
Stand 42	B747, B767-330, B777, A300, A310, IL96, A330/340.
Stand 43	B747, B747 (SP), B757, B767-300, B767-200/Dc10, B777, A310, A320/B737, A330/340
Stand 44	B747, B747 (SP), B757, B767, A310, B777, A330/340.
Stand 45	B747, B747 (SP), B757, B767, B767-300 DD, A320, A330/340
Stand 46	B747, A310, A320, B737, il96, B777
Stand 47	B747, B757, B767, A300, A310, B777, DC10, IL96, A330/340, A340-600..
Stand 48	B747, B747 (SP), B767, A300, A310, A330/340, A340-600.



Stand 49 B747, B747 (SP), B767, A300, A310, A320/B737, DC10, A330/340.

**vii) Cargo Apron**

- i) Parking stand no. 98 & 103 are suitable for AN124 type of aircraft.
- ii) Parking stand no. 99 to 102 are suitable for B747-300 type of aircraft.
- iii) B747-400 can be parked on alternate stands from stand no. 99 to 103..

## **II. SPECIAL RESTRICTIONS**

### **1 Closure of Airspace in and around Delhi for Air Force Day fly past**

Indian Air Force will carry out fly past rehearsal on 3<sup>rd</sup>, 4<sup>th</sup>, and 6<sup>th</sup> October, and final day fly past on 8<sup>th</sup> October every year on the occasion of Air Force Day.

In view of the above, the airspace of following dimensions will remain closed between 0230-0430 UTC on 3<sup>rd</sup>, 4<sup>th</sup>, 6<sup>th</sup> and 8<sup>th</sup> October every year for all aircraft except those participating in the rehearsal/final day fly past:

- i) Within a radius of **20NM** from IGI Airport, New Delhi: Ground level to **FL130**.
- ii) Within a circular area between **20NM** and 40NM radius of IGI Airport, New Delhi: Ground Level to **FL150**.

### **2 Airspace Closure and flying restrictions in Delhi FIR during celebrations connected with Independence Day and Republic Day**

- i) The following flying restrictions shall be applied within Delhi FIR during the under mentioned dates and time every year in connection with the celebrations of Independence Day and Republic Day.
- ii) Dates and Timings of Airspace Restrictions are as under:

<u>Date</u>	<u>Time</u>
22 <sup>nd</sup> January	1400 - 1830 IST
26 <sup>th</sup> January	0700 - 1230 IST, & 1400 - 1830 IST
29 <sup>th</sup> January	1400 - 1900 IST
15 <sup>th</sup> August	0600 - 1000 IST, & 1600 - 1900 IST

- iii) No flight shall be permitted to take off/land/over fly at Delhi and other airports within 300 KMS zone around it except:

- a) Routine Commercial flights,
- b) IAF, BSF and ARC flights,
- c) State owned aircraft/helicopters flying Governor or Chief Minister within the state.
- iv) Flights of Micro light aircraft and hang gliders from flying clubs and other airports shall not be permitted in the above mentioned zone and period around Delhi.
- v) Safdarjung airport shall remain closed during the above-mentioned dates and period except for IAF helicopters, which may be deployed on emergency duty or VVIP duty.

**III** The portion of RWY10 CAT I approach lights between 600M to 900M from RWY10 THR beyond Railway line U/S due to pilferage etc. However, approach lights upto 600M from RWY10 THR having crossbars at 150, 300, 450 and 600M are serviceable.

**IV** An illuminated wind direction indicator in the form of truncated cone made of fabric of black and white color in bands has been installed between TWY D and K ( Coordinates 283401.9N 0770529.7E) near RWY10.

**V** RCAG link between Delhi and Khajuraho frequency 120.9MHz.

**VI** Laser ceilometers installed near TDZ RWY28. The system will provide the height of base of low cloud (in Meters / Feet) in two layers as well as vertical visibility, Laser ceilometers will give height of base of low cloud from 10M up to 7500M with resolution of 10M.

## **VIDP AD 2.24 CHARTS RELATED TO AN AERODROME**

1. ILS (CAT- I) RWY 28
2. ILS (CAT II/IIIA/IIIB) RWY 28
3. VOR (X) RWY 28
4. VOR (Y) RWY 28
5. ILS RWY 10
6. VOR (X) RWY 10
7. VOR (Y) RWY 10
8. ILS RWY 27
9. NDB(Y) RWY 27
10. NDB (X) RWY 27
11. VOR (X) RWY 09
12. VOR (Y) RWY 09
13. SID RWY 28/27 04 CHARTS

14. SID RWY 10/09 05 CHARTS
15. STAR RWY 28 02 CHARTS
16. STAR RWY 27 02 CHARTS
17. STAR RWY 10/09 02 CHARTS
18. PDC FRONT APRON
19. PDC SATELLITE APRON
20. PDC INTERNATIONAL APRON
21. PDC CARGO APRON
22. AERODROME CHART.
23. PRECISSION APROACH TERRAIN CHART RWY 28